



WISE GUIDE

Automatic Stock Guide Positioning System with yield optimization capabilities



The **Wise Guide** automatic positioning stock guide is shown on a new Diehl ESL-25.

The system allows the operator to easily program a cutting list of multiple widths with the touch screen. It then calculates the best possible yield from each board, automatically positions the guide before each cut and tallies the cut piece against the cutting list to eliminate over production.

Maximum yield of board

Current distance of guide to right side of blade.

YIELD	93.64	CURRENT POSITION	01.250	EDGE	SETUP	BUST
1	% 42	1	% 0	1	% 37	% 15
	02.560		01.912		01.250	01.526
	% 20		% 10		% 30	% 24
	01.650		01.875		02.125	03.000
MAIN	TOO LEFT	TOO RIGHT	ON	BACK	NEXT	

Cutting list with % of each size already cut

Yellow squares show the cuts that achieve maximum yield

An actual screen shot showing the yield optimization system at work.



The **Wise Guide** automatic positioning extended stock guide and roller conveyor is shown on a Diehl Remanufactured SL-52.

Operation Of Diehl Wise Guide With Yield Optimization

YIELD ??.??	CURRENT POSITION 12.000	EDGE	SETUP	BUST
% 0	% 0	% 0	% 0	% 0
02.560	01.912	01.250	01.526	
% 0	% 0	% 0	% 0	
01.850	01.875	02.125	03.000	
MAIN	JOG LEFT	JOG RIGHT	ON	BACK
				NEXT

1 - The operator enters the required widths and quantities from the cutting list, up to a maximum of 8 entries. The system will accurately position the stock guide to within .003 of programmed widths.

5 - Quantity total is updated and the stock guide automatically moves to next width on list. Process is repeated for all remaining rips.



2 - The operator positions the board, using the laser line, leaving the least possible waste and then straight line rips the right edge of board. The board is returned to operator for step 3.

See A ➤

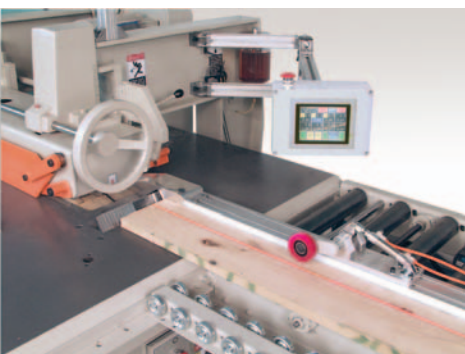
6 - The 3 widths ripped from the original board showing the right and left edge waste and the 93.64% yield achieved. Screen shown below.



3 - The board's usable width is found by positioning the laser at the far left side, leaving the smallest possible amount of waste. Stepping on the foot switch will then automatically move the stock guide until it senses board edge and determines usable stock width.

See B ➤

Operator is then ready for another board. Steps 2 - 5 are repeated until entire production is completed.



4 - The screen will then show the best possible yield and widths to rip from that board. See C ➤ Release foot pedal and stock guide automatically moves to the narrowest selected width. Rip is made and board is returned to operator for step 5.

Production screen showing selected widths, quantity for each and selected first cut to achieve the 93.64% yield.

YIELD 93.64	CURRENT POSITION 01.250	EDGE	SETUP	BUST
1 % 42	1 % 0	1 % 37	% 15	
02.560	01.912	01.250	01.526	
% 20	% 10	% 30	% 24	
01.850	01.875	02.125	03.000	
MAIN	JOG LEFT	JOG RIGHT	ON	BACK
				NEXT



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A - The stock guide will automatically move to the operator programmed "bust" position, normally 10" - 12" to the right of blade (or 1" - 2" wider than widest board to be ripped).

B - The stock guide can be jogged in either direction for exact placement of the blade path giving maximum usable width.

C - Within seconds the best possible yield from board is displayed on the screen (shown above) and accounts for saw kerf waste. The widths and quantities chosen for sizes are highlighted with a yellow square. The blue rectangle indicates the width to be cut first. This combination can be accepted and used, or rejected by selecting the "next" button for the next lower yield percentage. This offers the operator a choice to balance the quantities of all sizes for completion at nearly the same time.